Before the
Federal Communications Commission
Washington D.C. 20554

In the Matter of	)	
	)	
Telecommunications Relay Services	)	
And Speech-to-Speech Services for	)	CG Docket No. 03-123
Individuals with Hearing and Speech	)	
Disabilities	)	
	)	

COMMENTS OF COMMUNICATION SERVICE FOR THE DEAF, INC.

I. Introduction

Communication Service for the Deaf, Inc. (CSD) hereby submits these comments in response to the Federal Communications Commission's (FCC) Further Notice of Proposed Rulemaking (FNPRM) addressing (1) the provision of a uniform numbering system for video relay service (VRS) users and (2) the adoption of VRS Internet protocols or standards.[1]

II. Proxy Numbers for VRS Users

A. Background

CSD supports the establishment of a global database of proxy numbers for VRS users. At present, there is no consistent or uniform way for hearing individuals to identify and access VRS deaf and hard of hearing users across providers, in a manner that is functionally equivalent to that used by callers whose end-user contact information is linked to the North American

[1] *In the Matter of Telecommunications Relay Services and Speech-to-Speech for Individuals with Hearing and Speech Disabilities,* CG Dkt 03-123, FCC 06-57 (May 9, 2006) ("VRS Numbering and Protocol NPRM").

Numbering Plan (NANP). It was for this reason that on November 30, 2005, CSD requested the North American Numbering Council (NANC) for support and assistance in achieving dialing uniformity by VRS users.[2] In that request, CSD explained that although VRS users have IP addresses, these are dynamic and can constantly change, making them unreliable for routine or emergency calls. As noted by the FCC, the dynamic nature of these addresses often prevents callers from knowing the IP address of their equipment at any given time.[3] While static IP addresses are sometimes an alternative, these add costs for their owners, and are not always available to residential users. CSD added that "in order for VRS to be functionally equivalent to voice telephone services, deaf and hard of hearing individuals using video broadband communication need uniform and static end-point numbers linked to the NANP that will remain consistent across all VRS providers, so that they can contact one another and be contacted, to the same extent that PSTN and VoIP users are able to identify and call one another." CSD's full written submission to NANC is incorporated into these comments as Appendix A.

On January 24, 2006, CSD followed up its preliminary request with an in-person presentation to NANC (See Appendix B). CSD then explained that although making outbound VRS calls is not problematic, in order to make an

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[2] CSD noted that not having a personal telephone number that can be accessed across providers also complicates making point-to-point video calls over the Internet.

[3] VRS Numbering and Protocol NPRM at ¶45.

incoming VRS call, hearing people must first, know the telephone number of the VRS provider used by the person being called, and second, know the specific identifier for the deaf or hard of hearing VRS user they wish to reach. The latter can be any one of the following: (1) the VRS user's "user name;" (2) the pseudo phone number assigned to that user; (2) the extension given to that user; or (4) the user's IP address (typically dynamic). Because this dialing information changes with each VRS provider, it can be complicated, confusing, and sometimes next to impossible to complete the desired call.

At the January 24th meeting, NANC agreed to take up the uniform dialing matter as an action item, and immediately referred this issue to the Industry Numbering Committee (INC) of the Alliance for Telecommunications Industry Solutions. On January 31, 2006, INC held a general session at which CSD again presented this issue as an incoming liaison (GS-516) to that session. This presentation formed the basis for what has become INC issue 510: "Internet-Based Relay Services and Interoperability," which outlines and seeks a solution for the numbering deficiencies.[4] Since then, Sprint also submitted a contribution on Issue 510, which represents the joint Sprint/CSD proposed numbering solution. Sprint's presentation further defined the issues that need to be resolved as follows:

[4] INC issue 510 goes beyond VRS, to reach all Internet-based relay services. It is just as difficult for hearing people to contact deaf and hard of hearing individuals through Internet-based text relay services without a uniform numbering system as it is to contact deaf and hard of hearing VRS users.

- *Personal telephone numbers.* At present, deaf and hard of hearing VRS users do not receive a standard 10-digit personal telephone number (TN) based on their location. This prevents these individuals from enjoying a "seamless" or "transparent" telephone service. Relay customers need the ability to have a TN dialed by any hearing caller over the PSTN and have the call connect to them by way of a relay provider.
- *Emergency 911 services.* Relay customers must be able to have integrated 911 services that allow for location provisioning, E911 support, and callbacks from public safety answering points (PSAPs).
- *National directory services*. The proxy numbers that now exist for VRS users are not available in public telephone directories, such as 411 or general use phone books. Currently, only limited relay-user directories are available online. In order for hearing users to be able to identify and contact people who are deaf and hard of hearing over Internet-based relay services, relay customers must be included in and have the same access to directory services as users of the PSTN .
- *Preferred carrier.* At present, hearing callers who make calls to deaf and hard of hearing VRS users must use the carrier that those individuals have chosen. This differs from the arrangement

that exists for interstate text-based relay calling, where the hearing person may select among several interstate relay providers based on their preferences (such as quality of communication assistants). It also differs from the arrangement that conventional voice telephone subscribers use for most of their calls.

B. Internet-Based Relay Users Should be Assigned 10-Digit Personal Telephone Numbers by a Neutral, Third Party.

Sprint has proposed that each Internet-based text and VRS user be assigned a 10-digit regionally recognizable telephone number directly by a third party, such as the user's local exchange carrier (LEC), in order to provide these individuals with a simple and clearly defined method for being contacted and contacting others. CSD strongly urges the FCC to direct that this approach be adopted to achieve uniform and easy dialing for Internet-based relay text and video users.

CSD believes that deaf and hard of hearing individuals who use VRS have the right to a 10-digit telephone number that in all respects is equivalent to those used by their hearing peers. This would allow deaf and hard of hearing users to make use of their telephone numbers in all ways without discrimination. In addition to having the capability to give out their numbers to friends and family – in the exact same way that hearing users of PSTN and VoIP services can – deaf and hard of hearing people would be able

to complete job applications, medical forms, home mortgage applications, and the like, without having to include additional and often complex information about relay services. Personal telephone numbers would also achieve integrated E911 support with correct PSAP callback. Finally, inclusion of these numbers in telephone directories would make the individuals assigned these numbers more accessible to their hearing counterparts.

CSD agrees with Sprint that a third party, rather than VRS providers, should be responsible for assigning these 10-digit regional numbers directly to relay users. Up until now, VRS providers have been mimicking the function of local exchange carriers (LECs) by distributing their own proxy numbers to VRS consumers. CSD believes that it is inappropriate to continue this practice because it impedes the ability of VRS users to receive seamless and transparent telephone service – and therefore truly functionally equivalent communications. Moreover, this practice could be harmful to competition and in direct conflict with the FCC's recent orders to increase interoperability and competition. This is because if each individual relay provider is permitted to purchase and assign 10-digit numbers for their customers, all inbound and outbound traffic to those customers will default to that provider. The only way to change the assignment of a particular VRS provider would be for the consumer to obtain a different 10-digit number (because the VRS providers would own the 10-digit numbers). This conflicts with current notions of number portability – i.e., the principle that telephone

subscribers should be able to keep their telephone numbers in the event that they change telephone carriers. The majority of the telecommunications industry has shifted away from "owning" 10-digit numbers in light of this new trend, which supports the customer's right to choose a LEC or wireless carrier, regardless of the 10-digit number assigned to that individual.

CSD maintains that it is far more appropriate – and functionally equivalent – to allow the party initiating a telephone communication – whether deaf or hearing – to be able to chose his or her preferred relay service. Existing mainstream telecommunications networks generally allow the originator of a call to control the carrier that handles that call. Additionally, for interstate text-based relay calling, the hearing person may chose any interstate relay provider. Further, in California, the one state that offers relay multivendoring, hearing users who initiate calls may choose any one of the three approved relay providers to handle their calls. When calls are made by hearing individuals who have not registered their provider preference, they are automatically routed to one of these three relay providers on a rotating basis. This solution promotes user freedom of choice and fosters competition within the industry.

There are two other reasons for giving the responsibility of assigning personal Internet-based relay telephone numbers to a neutral, third party. First, allowing numbers to be assigned by relay providers may lead to increased costs in providing VRS service. Specifically, having relay

providers purchase and assign local 10-digit numbers would require each relay provider to unnecessarily duplicate LEC functionality. Second, the likelihood of a customer being "slammed," or being assigned a telephone number without providing consent, is reduced if a LEC or other neutral party assigns and administers the local 10-digit numbers.

C. 911 Emergency Calls

A consistent and uniform numbering solution is especially needed for the handling of emergency VRS calls. Indeed, the FCC itself notes its repeated emphasis on the "importance of ensuring that consumers have access to emergency services."[5] Specifically, PSAP personnel need to be able to return calls to individuals when incoming calls are disconnected, to the same extent that this is required of all interconnected VoIP providers.[6] By integrating VRS into the NANP, fixed location videophones and set-top boxes, such as a D-Link DVC-1000, can be matched to an MSAG compliant address and be connected to the appropriate PSAP using the same PSAP systems and procedures that are in place today. In the event that a call-back is required from the PSAP, this would allow the PSAP operator to proceed using the same standard protocols used for calling back a hearing party. This not only provides functional equivalence, but can save lives by not requiring

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[5] VRS Numbering and Protocol NPRM at ¶35.

[6] *In the Matter of IP-Enabled Services, E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, WC Dockets No. 04-36, 05-196, FCC 05-116 (June 3, 2005).

specialized procedures used only when dealing with people who are deaf and hard of hearing.

III. Adoption of Specific VRS Internet Protocols or Standards

In its Declaratory Ruling mandating VRS interoperability, the FCC has already directed new VRS providers entering the VRS market to ensure that their service is interoperable with the VRS services being offered by existing providers. CSD appreciates this directive as the only one that is fair under the circumstances. While new technologies, such as SIP, should be encouraged in order to provide VRS consumers with access to the most advanced technologies, backward compatible translations are essential to ensure that legacy end user equipment and platforms are not rendered obsolete.

When a new VRS technology is introduced that can substantially improve the provision of VRS, such technology should not be mandated before consumers and industry have had a full opportunity to review and comment on the reasonableness of its implementation, suggested timelines for its roll-out, and FCC standards specifying the protocol and introduction of such technology. Such review should be conducted for each video technology on a case-by-case basis as technology evolves in the video arena. An opportunity to provide feedback on the adoption of such standards should also be provided to stakeholders through established vehicles such as the FCC's Consumer

Advisory Committee and the NECA Interstate TRS Advisory Committee.[7] Absent FCC standards clearly defining the new protocol, providers would be able to manipulate the marketplace at a significant cost to ratepayers that subsidize the TRS fund.

The costs for incorporating a new technology into a VRS platform should be reimbursable from the TRS fund, but such costs should not be eligible for reimbursement until the technology is approved and adopted by the FCC, and made applicable to all VRS providers by an agreed upon date. This will prevent placing any particular provider or providers at a particular disadvantage (or an inappropriate advantage), but would still encourage the development of new technology that can enhance communication access for VRS end users.

IV. Conclusion

CSD appreciates this opportunity to provide the Commission with input on the above matters concerning Internet-based numbering and Internet protocols. We look forward to working with the Commission to resolve these matters in a fashion that brings about functional equivalency for relay consumers and competition for relay providers to the greatest extent possible.

Respectfully submitted,

[7] To the extent that states are required to contribute to the support of VRS in the future, they, too, should have an opportunity to offer feedback on the adoption of new standards, through state TRS administrative bodies.

/s/

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APPENDIX A

The Need for Uniform End User Numbering:
A Request for Assistance to the North American Numbering Council

November 30, 2005

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Request: A Uniform Numbering Scheme for VRS Users and Providers

Video Relay Services (VRS) enable individuals who use American sign language to communicate via the Internet through remote sign language interpreters and video equipment installed at their premises. The individual user logs onto a VRS website, which then connects the user to an interpreter who, in turn, connects the calling party to his destination. Once the calling party and called party are connected, the two converse naturally through the interpreter, with the interpreter speaking everything that the calling party signs and then signing back to that party the called party's responses. VRS is authorized by the Americans with Disabilities Act, and in 2000, was approved by the FCC for compensation from the National Carriers Exchange Administration. Over the past several years, VRS usage has grown enormously: currently, VRS providers handle over 2 million minutes of calls each month.

Video relay services offer telephone-like communications for deaf people that are truly functionally equivalent to voice telephone services. Unlike text-based relay services, which can be slow and cumbersome, VRS allows naturally-flowing, real time conversations that mirror the speed and style of voice-to-voice conversations. Specifically, VRS allows users of sign language to converse comfortably, using emotional context, voice inflection and other non-verbal information not easily conveyed through text. Also, because VRS is in real time, it allows callers to participate in conference calls and effectively use telephone systems that have interactive menus.

Unlike the voice telephone network, however, VRS users are presently not linked to a uniform numbering scheme. In other words, there is no consistent way for users of these services to identify and access other users in a manner that compares with callers whose end-user contact information is linked to the North American Numbering Plan (NANP). Instead, there are several

identifications systems used by the existing eight VRS providers, forcing VRS users to list multiple ways of receiving VRS calls if they want return calls back from hearing individuals. The resulting complex and confusing arrangement discourages calls from hearing persons, who must have specific provider information and extensions in order for their calls to be properly routed to all their deaf contacts.

This situation is complicated even further by the fact that at least one VRS provider uses an LDAP ("Lightweight Directory Access Protocol") that is closed to other providers. Specifically, that provider uses a unique VRS identifier in the form of a telephone number – often identical to the individual's voice telephone number, though this time not linked to the NANP. This "telephone number" is then cross-referenced to the deaf user's dynamic (and ever-changing) IP address through the LDAP. The provider's video equipment automatically and periodically registers with a unique network server to update the IP address information of its users. However, in the instance of this provider, even where a hearing party has the correct unique identifier (or the telephone number) assigned to the deaf VRS user, the hearing person still is not able to establish contact with that individual through a competing provider because the LDAP blocks access to other providers. Thus, if the hearing individual makes the VRS call through a VRS competitor, that competitor has no way to cross-reference the unique identifier to the deaf user's dynamic IP address, and the call cannot go through.

The negative consequences of this arrangement – and the general failure to have a uniform VRS numbering scheme – can be seen in VRS call volumes. Although VRS usage by deaf and hard of hearing individuals has soared over the past two years, calls from hearing people to deaf VRS users have hardly risen, and presently account for scarcely 1-2% of all VRS minutes. The lack of a nationwide VRS numbering system also creates considerable problems for peer-to-peer video users, who are without a consistent and uniform means of calling one another.

Both NANPA and the FCC once before addressed the need for uniform numbering for relay users. Specifically, in the mid-1990s, careful consideration was given to the use of 711 as a ubiquitous relay access number, following a petition for rulemaking on this subject by national deaf organizations. When, in July of 2000, the FCC finally mandated the use of 711 for nationwide relay services, the rewards were swift: after several years of being stagnant, relay call volumes in a number of states increased dramatically, with substantial increases in calls initiated by hearing individuals. Now, rather than requesting a single access number, we are simply seeking a way for VRS users to have what all PSTN voice users

already have and what VoIP users are now obtaining – the ability to have a single telephone number or end user identifier that enables all calls to always go through to any VRS or video user, regardless of the provider or equipment used. It is also worth noting that in order for 711 relay access to become a functional part of VRS, there needs to be a single method of interconnecting VRS users. This is because 711 callers need to be able to give communications assistants who answer 711 calls the telephone number or identifier for the party being called (if there is no common identifier, then a communications assistant working for company A would not be able to complete a call to an individual using equipment from company B.)

When Congress enacted the ADA, it intended for relay services to be a tool to foster the independence and integration of deaf and hard of hearing individuals. While telecommunications relay services and VRS have gone a long way toward achieving this goal, when a VRS user calls an employer or a doctor who is unavailable, the caller has little assurance that he will get his called returned via VRS because of the numbering difficulties just described. The ADA's objective to fully mainstream all individuals with disabilities throughout American society cannot be realized until VRS users can be confident that their calls will be returned.

Just last month, the FCC noted the importance of ensuring the fair and efficient administration of our nation's numbering resources. In its public notice renewing NANC's charter, the Commission explained that "[t]elephone numbers are the means by which consumers gain access to, and reap the benefits of, the public switched telephone network." For deaf people using the "VRS network" or point to point video communications over the Internet, this access remains severely limited. A seamless numbering scheme that allows all VRS users – deaf and hearing – to contact each other and receive calls with the same ease that PSTN and VoIP users have is needed to achieve the level of functional equivalency sought by the ADA's drafters (as well as by the drafters of Section 255 of the Communications Act) . This is especially important in emergency situations, where PSAP personnel need an effective means of calling back individuals in the event incoming calls are disconnected. Indeed, recent FCC directives for interconnected VoIP providers *require* such providers to have customer call back numbers.

Request for NANC's Assistance for a uniform VRS numbering scheme

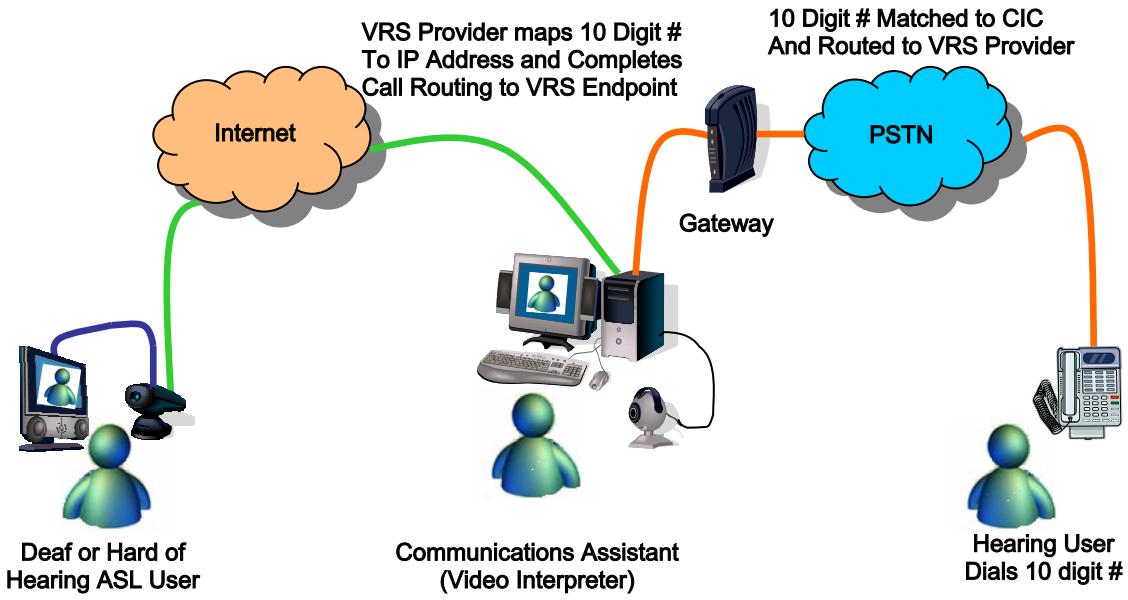
In summary, currently, there is no uniform means of "dialing" a video user across providers. Although VRS users have IP addresses, these are dynamic – because they are constantly changing, they are unreliable for making routine or emergency calls. Static IP addresses are expensive and

often unavailable to residential users. In order for VRS to be functionally equivalent to voice telephone services, deaf and hard of hearing individuals using video broadband communication need uniform and static end-point numbers linked to the NANP that will remain consistent across all VRS providers, so that they can contact one another and be contacted, to the same extent that PSTN and VoIP users are able to identify and call one another. We request that NANC support dialing uniformity for VRS and point-to-point video users and believe that this request falls squarely within the following policy objectives, as stated in the Council's Charter:

- to ensure that the NANP facilitates entry into the communications marketplace by making numbering resources available on an efficient, timely basis to communications service providers;
- to ensure that the NANP does not unduly favor or disfavor any particular industry segment or group of consumers;
- to ensure that the NANP does not unduly favor one technology over another; and

to ensure that the NANP gives consumers easy access to the public switched telephone network (and in this case, its broadband successor).

APPENDIX B


VRS Provider maps 10 Digit #
To IP Address and Completes
Call Routing to VRS Endpoint
10 Digit # Matched to CIC
And Routed to VRS Provider
Internet
PSTN
Gateway
Deaf or Hard of
Hearing ASL User
Communications Assistant
(Video Interpreter)
Hearing User
Dials 10 digit #